

Having thus described the invention, it is so claimed:

1. In a motor operated sprayer for a fluid supply container comprising, a discharge opening, a variable volume pump having a pump axis and having axially spaced apart fixed and movable ends, said fixed end being in flow communication with said discharge opening, an inlet for connecting said pump with fluid in a supply container, an outlet for connecting said pump with said discharge opening, an electric motor, a cam rotatably driven by said motor, and a cam follower for displacing said movable end of said pump, whereby rotation of said cam axially displaces said movable end toward and away from said fixed end for pumping fluid from said container through said outlet and discharge opening, the improvement comprising: said cam and said cam follower having interengaging cam faces for balancing lateral forces therebetween during rotation of said cam relative to said cam follower.

2. A sprayer according to claim 1, wherein said pump and discharge opening are coaxial.

3. A sprayer according to claim 1, wherein said motor has an output shaft rotatable about a motor axis parallel to said pump axis.

4. A sprayer according to claim 1, wherein each said cam and cam follower has an axis and includes a first cam face in a first plane intersecting the corresponding axis at an angle thereto, and a second cam face in a second plane intersecting said first plane at an angle thereto.

5. A sprayer according to claim 4, and spring means biasing said cam follower axially toward said cam.

6. A sprayer according to claim 4, wherein said pump includes a support for axially slidably supporting said cam follower, said support and cam follower having rollers and slots interengaging to restrain relative rotation therebetween.

7. A sprayer according to claim 6, wherein said support includes a cylinder and said rollers and slots include diametrically opposite slots in said cylinder and rollers on said cam follower received in said slots.

8. A sprayer according to claim 4, wherein said first cam face of each said cam and cam follower has a first outer diameter, and said second cam face of each said cam and cam follower has a second outer diameter less than said first diameter.

9. A sprayer according to claim 8, wherein each of said first and second cam faces has an axially outermost and an axially innermost point on the corresponding diameter.

10. A sprayer according to claim 9, wherein the axially outermost points of the first and second cam faces of each said cam and cam follower are in a plane transverse to said axis thereof.

11. A sprayer according to claim 10, wherein the axially outermost points of the first and second cam faces of each said cam and cam follower are diametrically opposed.

12. A sprayer according to claim 11, wherein the axially innermost points of the first and second cam faces of each said cam and cam follower are in a plane transverse to the axis thereof.

13. A sprayer according to claim 12, wherein said pump includes a support for axially slidably supporting said cam follower, said support and cam follower having rollers and slots interengaging to restrain relative rotation therebetween.

14. A sprayer according to claim 13, wherein said support includes a cylinder and said rollers and slots include diametrically opposite slots in said cylinder and rollers on said cam follower received in said slots.

15. A sprayer according to claim 14, and spring means biasing said cam follower axially toward said cam.

16. A sprayer according to claim 8, wherein said pump includes a support for axially slidably supporting said cam follower, said support and cam follower having rollers and slots interengaging to restrain relative rotation therebetween.

17. A sprayer according to claim 16, wherein said support includes a cylinder and said rollers and slots include diametrically opposite slots in said cylinder and rollers on said cam follower received in said slots.

18. A sprayer according to claim 17, and spring means biasing said cam follower axially toward said cam.

19. In a motor operated sprayer for a fluid supply container comprising, a discharge opening, a variable volume pump having a pump axis and having axially spaced apart fixed and movable ends, said fixed end being in flow communication with said discharge opening, an inlet for connecting said pump with fluid in a supply container, an outlet for connecting said pump with said discharge opening, an electric motor, a cam rotatably driven by said motor, a cam follower for displacing said movable end of said pump, whereby rotation of said cam axially displaces said movable end toward and away from said fixed end for pumping fluid from said container through said outlet and discharge opening, and said pump and cam follower including interengaging means for axially slidably supporting said cam follower, the improvement comprising: said interengaging means including rollers on one of said pump and cam follower, and slots on the other receiving said rollers.

20. A sprayer according to claim 19, wherein said pump includes a support for said cam follower, said slots being in said support.

21. A sprayer according to claim 20, wherein said cam follower has an axis and said rollers are rotatable about an axis transverse to the axis of the cam follower.

22. A sprayer according to claim 21, wherein the axis of the rollers is spaced from the axis of the cam follower.

23. A sprayer according to claim 20, wherein said support includes a cylinder and said rollers and slots include diametrically opposite slots in said cylinder and rollers on said cam follower received in said slots.